# **Communicating Research to Public Audiences**

### **Program Solicitation**

NSF 03-509 Replaces Document NSF 97-70



### **National Science Foundation**

Directorate for Education and Human Resources
Division of Elementary, Secondary and Informal Education

#### Full Proposal Deadline(s):

No fixed deadline.

Proposals may be submitted at anytime, but at least six months prior to anticipated start date.

### SUMMARY OF PROGRAM REQUIREMENTS

#### **General Information**

# **Program Title:**

Communicating Research to Public Audiences

## Synopsis of Program:

Communicating Research to Public Audiences is a component of the Informal Science Education program (ISE) in the Division of Elementary, Secondary, and Informal Education. ISE projects provide rich and stimulating contexts and experiences for individuals of all ages, interests, and backgrounds to increase their appreciation for, and understanding of, science, technology, engineering, and mathematics (STEM) in out-of-school settings. Requests for up to \$75,000 will be considered to support projects that communicate to public audiences the process and results of current research that is being supported by any NSF directorate through informal science education activities, such as media presentations, exhibits, or youth-based activities. The purpose of these efforts is to disseminate research results, research in progress, or research methods.

### Cognizant Program Officer(s):

General Information: (703) 292-8616

• Orrin Shane, Program Director, Directorate for Education & Human Resources, Division of Elementary, Secondary, & Informal Education, 885 S, telephone: (703) 292-5106, fax: (703) 292-9044, email: oshane@nsf.gov

# Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.074 --- Biological Sciences
- 47.070 --- Computer and Information Science and Engineering
- 47.076 --- Education and Human Resources
- 47.041 --- Engineering
- 47.050 --- Geosciences
- 47.049 --- Mathematical and Physical Sciences
- 47.078 --- Office of Polar Programs
- 47.075 --- Social, Behavioral and Economic Sciences

#### **Eligibility Information**

- Organization Limit: None Specified.
- PI Eligibility Limit:

The PI must have an active NSF research award; a letter of support from the cognizant Program Officer for the research award is required.

NSF research awards **do not** include Small Grants for Exploratory Research Awards; Conference, Symposia, and Workshops grants; Dissertation Improvement Awards; or Post-doc Fellowships.

• Limit on Number of Proposals: One proposal per active research award.

#### **Award Information**

- Anticipated Type of Award: Standard or Continuing Grant
- Estimated Number of Awards: 20 per year
- Anticipated Funding Amount: \$1,500,000 pending availability of funds.

# **Proposal Preparation and Submission Instructions**

### **A. Proposal Preparation Instructions**

• Full Proposal Preparation Instructions: The program announcement/solicitation contains supplements to the standard Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full program announcement/solicitation for further information.

### **B. Budgetary Information**

- Cost Sharing Requirements: Cost Sharing is not required.
- Indirect Cost (F&A) Limitations: Not Applicable.
- Other Budgetary Limitations: Not Applicable.

#### C. Due Dates

• Full Proposal Deadline Date(s):

No fixed deadline.

Proposals may be submitted at anytime, but at least six months prior to anticipated start date.

#### **Proposal Review Information**

• Merit Review Criteria: National Science Board approved criteria. Additional merit review considerations apply. Please see the full funding opportunity document for further information.

## **Award Administration Information**

- Award Conditions: Standard NSF award conditions apply.
- Reporting Requirements: Additional reporting requirements apply. Please see the full funding opportunity document for further information.

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#### I. INTRODUCTION

Communicating Research to Public Audiences grants are a special category of projects supported under the Informal Science Education (ISE) program. The National Science Foundation's ISE program supports projects designed to increase public interest in, understanding of, and engagement with science, technology, engineering, and mathematics (STEM). The outcome of all ISE projects is an informed citizenry that has access to ideas and tools of science and engineering to enhance their quality of life and the health, prosperity, welfare, and security of the nation.

Informal education is the lifelong learning process in which every person acquires knowledge, skills, attitudes, and values from daily experiences and resources in his or her environment. Informal learning is self-directed, voluntary, and motivated mainly by intrinsic

interests, curiosity, exploration, and social interaction.

All ISE projects have as their primary audience the informal learner -- from young child to senior citizen. Informal learning, in contrast with formal learning, refers to activities that are not primarily for school use or part of an ongoing school curriculum.

#### II. PROGRAM DESCRIPTION

The purpose of *Communicating Research to Public Audiences* grants is to promote the discovery, integration, dissemination, and employment of new knowledge in service to society and to achieve excellence in U.S. science, technology, engineering, and mathematics (STEM) education at all levels. These grants will provide an opportunity for Principal Investigators (PIs) to explain in non-technical terms the methods and/or results of their research to a broad and diverse audience. *Communicating Research to Public Audiences* (NSF 03-509) replaces *Supplements to Active Research Awards* (NSF 97-70).

Projects with funding levels up to \$75,000 will be supported to communicate the processes and results of current research awards from any NSF directorate or the Office of Polar Programs to public audiences in order to assist in the broader dissemination of research results and to promote science and technological literacy for the general public in an out-of-school setting. The grant can be used for any activity that falls within the definition of an informal science education activity such as media presentations, exhibits, or youth-based activities, in order to disseminate research results, research in progress, or research methods.

Examples of funded projects include the following:

NSF Award Numbers: 9531565 and 9940909 (ISE)

Institution: University of Wyoming; University of Colorado

Pls: Neil F. Humphrey; W. Tad Pfeffer; B. Amadei

Title: Direct Measure of the In Situ Stress Tensor at Depth in Glacier Ice: A Collaborative Study Glaciological Interpretation at

**Worthington Glacier State Park** 

The informal science education project developed interpretive materials highlighting the results of several NSF-funded glaciological research projects at Worthington Glacier and targeting visitors to Worthington Glacier State Park. Thirteen permanent interpretive display panels were designed, produced, and erected at a glacier overlook area in Worthington Glacier State Park. In conjunction with the panels, a free take home brochure was also developed for the visitors. The materials were produced as a collaborative effort, with researchers providing consultation on presentation and visual display.

The NSF-funded research, originally supported by the Office of Polar Programs, developed a technique for direct in situ measurement of the stress tensor in deep glacier ice by adapting methods presently used in rock mechanics for measurements of in situ stress of viso-elastic/plastic materials. This allowed independent observations of full stress tensor and full strain rate tensor in glacier ice. The determination of the spatial and temporal character of coupling between glacier ice and the glacier bed led to an understanding of the behavior of ice sheets, patterns of coupling at the bed, and velocity fields that arise in the ice.

NSF Award Numbers: 9709522 and 0109329

**Institution: Gallaudet University** 

PI: Ceil Lucas

Title: The Socio-linguistic Variation in American Sign Language, Phase II

The informal science education project developed a videotape and workbook to educate the general public -- both hearing and deaf -- about the nature of socio-linguistic variation in American Sign Language (ASL). The project is based on two NSF-funded research projects on the same topic, which point to grammatical function as a major factor in phonological, syntactic, and lexical variation in ASL. This project includes workshops for public audiences in Maryland, Virginia, Massachusetts, Missouri, Louisiana, California, and Washington, providing an introduction to basic concepts related to language structure and socio-linguistics.

The NSF-funded research, originally supported by the Division of Behavioral and Cognitive Sciences in the Directorate for Social, Behavioral, and Economic Sciences, developed socio-linguistic variations in American Sign Language, with a focus on phonological, lexical, and syntactic variation. Phase I of this project (93-10116) collected videotaped data from 207 American Sign Language Users

from seven sites throughout the United States. In Phase II, graduate research assistants got hands-on experiences in data reduction, analysis, and the dissemination of the findings of the project.

NSF Award Numbers: 9405024 and 9940896 Institution: University of California San Diego

PI: Veerabhadran Ramanathan

Title: Catch A Cloud

Catch A Cloud is an integrated public education package on the importance of clouds to scientific models of global climate change. Ongoing research at Scripps Institute of Oceanography and its Center for Clouds, Chemistry, and Climate (C-4) are fine-tuning models of global systems, improving scientists' ability to project future climate change patterns. To explain scientific modeling and the role of clouds in atmospheric studies to the public, a seven-minute video feature, entitled Clouds and Climate Change, was proposed, documenting scientists gathering cloud data in the Indian Ocean off the coast of Maldives. As another component of the project, an interactive aquarium exhibit was developed to illustrate how clouds either increase or decrease warming of water and air by solar and indirect (or re-radiated) heat sources. A Meet-the-Scientist presentation at the aquarium offered visitors the opportunity to ask questions about researchers' work, while companion activities were made available to visitors and families through the aquarium's Web site and a handout of activities to do at home.

The NSF-funded research, originally supported by the Division of Atmospheric Sciences in the Directorate for Geosciences, developed theoretical, observational, and modeling bases required to understand and predict Earth's changing climate as affected by clouds, radiation, and atmospheric chemistry and their interactions, be these a result of natural causes and/or human activities.

#### III. ELIGIBILITY INFORMATION

The categories of proposers identified in the Grant Proposal Guide are eligible to submit proposals under this program announcement/solicitation.

The PI must have an active NSF research award; a letter of support from the cognizant Program Officer for the research award is required.

#### IV. AWARD INFORMATION

The maximum award amount is \$75,000. The maximum award period is 24 months. It is expected that the product (e.g. exhibit, film, program) will have a life beyond the expiration of the award. Estimated program budget, number of awards, and average award size/duration are subject to the availability of funds.

## V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

### A. Proposal Preparation Instructions

### **Full Proposal Instructions:**

Proposals submitted in response to this program announcement/solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF *Grant Proposal Guide* (GPG). The complete text of the GPG is available electronically on the NSF Website at: http://www.nsf.gov/cgi-bin/getpub?gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

A Principal Investigator (PI) is advised to contact the cognizant Program Officer in the Informal Science Education (ISE) program, Division of Elementary, Secondary, and Informal Education, Directorate for Education and Human Resources prior to submitting a proposal.

The full proposal may be submitted at any time during the year. However, the full proposal should be submitted at least six months before the anticipated starting date of the proposed project.

Submission of full proposals via FastLane requires completion of the following FastLane forms:

Cover Sheet. (See GPG, Chapter II, Section C.2.a) The Cover Sheet must contain all requested information. If project funds are requested from another Federal agency or another NSF program, it must be indicated on the Cover Sheet. If such funds are requested subsequent to proposal submission, a letter should be sent to the attention of the ISE program identifying the proposal by its NSF proposal number. Proposers are reminded to identify this program solicitation number NSF 03-xx in the program announcement/solicitation block on the Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing. The related preliminary proposal number should be entered on the Cover Sheet as well. The title of the project should be typed exactly as you wish it to appear in the NSF data file.

The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications. The AOR must provide the required certifications *within five working days* following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane website at:http://www/fastlane.nsf.gov.

**Project Summary.** (See GPG, Chapter II, Section C.2.b) A one-page (250 word) Project Summary should be prepared, suitable for publication, which presents a self-contained description of the activity that would result if the proposal were funded. It **must** address the two NSF merit review criteria, *Intellectual Merit* and *Broader Impacts*, in separate paragraphs. The summary should be written in the third person and present tense. The initial sentences should describe the nature of the medium being used in the informal learning activity, the disciplinary content of the project, the primary intended audience, and a brief description of the active research project upon which the informal learning activity is based.

Table of Contents. (See GPG, Chapter II, Section C.2.c) The Table of Contents is automatically generated in FastLane.

**Project Description** (including Results from Prior NSF Support). (See GPG, Chapter II, Section C.3) The Project Description contains most of the information that determines whether or not a grant will be awarded. It **must** address the two NSF merit review criteria: *Intellectual Merit* and *Broader Impacts*. Reviewers will use this information in judging the merit of the proposal as described in this document. The maximum number of pages allowable for the *Project Description* is 15 pages. Page formats should be single-spaced with a clear and legible type size of not smaller than 12-point type and with no less than 2.5 cm margins on all sides.

The narrative section of the project proposal should include a project overview, goals and objectives, general project description, qualifications of key personnel who will be conducting the project, anticipated results, and evaluation and dissemination plans. Substantive information essential to understanding the details of complex projects should be submitted as supplementary documents with explicit references in the narrative.

Exemplary project descriptions will contain the elements listed below:

- **Statement of Need**. Describe the research upon which this project is based and the educational need being met through this informal science education activity.
- Target Audience. Specify the intended primary audience, which must be informal learners, and indicate the projected number of people to be served by the project. Projects are stronger when they are intended for a particular, focused audience rather than the general public.
- **Project Goals.** State the project goals in terms of the intended impact on the target audience. This may include a broad scope of goals including STEM knowledge, skills, and affective goals.

- **Project Design.** Describe the overall approach and components of the project. Discuss the scope and depth of the science, and the manner and style in which it will be presented. What is the target audience's experience as they participate in the project? What are the project deliverables? (Detailed examples of the project components, such as exhibit layouts, media treatments, scripts, storyboards, descriptions of learning activities and outreach activities should be submitted as supplementary documents.)
- **Key Staff, Consultants, and Advisors.** Provide a description of the responsibilities and qualifications of the key staff involved in the project and the role of key consultants and advisors at each stage of project.
- Links with Formal Education. When appropriate, indicate how the project content aligns with state or national science, mathematics, and technology standards. What activities and/or materials are being developed that will extend the use by and impact on students and teachers?
- Ancillary Material. Describe any ancillary material that will be produced.
- **Dissemination.** Describe, as appropriate, how the project will be distributed to reach the target audience, and/or how information about the project and any knowledge gained in developing the project will be conveyed to the informal science education field.
- **Promotion.** Describe the marketing and promotion plans for the project.
- **Evaluation.** Describe the plans for evaluation. Provide the name and credentials of the evaluator/s; general information about the evaluation strategy, process, and methods; and, the evaluation timeline and budget. (Detailed evaluation plans should be included in the supplementary documents).
- **Timeline.** Provide a month-by-month schedule for the project that indicates the major development steps for all the aspects of the project.
- Sustainability. Describe the plans to continue the project beyond the period of the grant, as appropriate.

**Results from Prior Support** (See GPG, Chapter 11, Section C.2.d.iii). The prospective PI or Co-PI(s) **must** provide, in sufficient detail, a description of the project(s) and outcomes of related NSF-funded activities to enable reviewers to assess the value of results achieved. Past projects should be identified by NSF award number, funding amount, period of support, title, summary of results, and a list of publications and formal presentations that acknowledge the NSF award (do not submit copies of the latter). PIs must have submitted a final report for any completed NSF-funded project, or no new grant may be awarded.

**References Cited** (See GPG, Chapter II, Section C.2.e). Any literature cited should be specifically related to the proposed project, and the Project Description should make clear how each reference has played a role in the motivation for, or design of, the project.

**Biographical Sketches** (See GPG, Chapter II, Section C.2.f). Biographical information must be provided for each person listed as senior personnel listed on the budget form, as well as key consultants and advisors. (No more than two pages per person.) Include career and academic credentials and an email and mailing address.

**Budgets** (including Justifications). (See Budgetary Information section of these Guidelines.) A one-page narrative budget explanation should be included in the Budget Justification. Include a projected total budget with a detailed and clear indication of the percentage of that budget being sought from non-NSF funding sources; the anticipated sources of other funding; and an indication of how the project will be funded after an NSF award period, if applicable.

Current and Pending Support Form (See GPG, Chapter II, Section C.2.h)

Facilities, Equipment, and other Resources (See GPG, Chapter II, Section C.2.i)

Special Information and Supplementary Documentation (See GPG, Chapter II, Section C.2.j) Reviewers are often asked to read

and assess a substantial number of competing proposals. For this reason, the project description alone should provide sufficient information so that a reviewer unfamiliar with the context of the project can make an informed judgment. In some cases, it may be critical to convey more detailed information to demonstrate levels of competence or expertise, to document commitment of personnel or other resources, to demonstrate the quality of ancillary materials, or to provide other relevant information. For example, for a television series, the narrative would: outline the scope of the series and briefly describe the programs (outlines, treatments, or scripts would be in the supplementary documents), provide a general description of evaluation plans (details plans would be in the supplementary documents); and describe major elements of outreach plans (detail plans would be in the supplementary documents). Additionally, the proposal may refer to websites that contain this type of supplementary material. Presentation of such materials should be thoughtful and concise. The supplemental documents must include a letter of support from the cognizant NSF Program Officer for the active research award upon which this proposal is based.

Supplementary materials that cannot be submitted electronically must be mailed directly to the ISE program, clearly labeled with the proposal number and title of project. Fifteen (15) copies of any ancillary materials such as videocassettes or exhibit layouts are required. Although NSF does not require reviewers to read supplementary materials, ISE reviewers are asked to read any documents explicitly referenced in the proposal description.

### Catagories of Activities that Fall Outside the Guidelines

Support should not be requested for:

- Web pages or electronic databases without a substantial educational interface,
- capital equipment, or
- materials to be used primarily in classrooms or as part of an ongoing school curriculum.

Proposers are reminded to identify the program announcement/solicitation number ((03-509)) in the program announcement/solicitation block on the proposal Cover Sheet. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

### **B. Budgetary Information**

### **Cost Sharing:**

Cost sharing is not required in proposals submitted under this Program Solicitation.

# **Budget Preparation Instructions:**

Although cost sharing is not required, it is expected that additional support may be needed from other sources to support the project's total cost. Documentation of the availability of other leveraged support must be included in the proposal as appropriate.

#### **C. Due Dates**

Proposals submitted in response to this announcement/solicitation will be accepted at any time.

### Full Proposal Deadline(s):

No fixed deadline.

No fixed deadline.

Proposals may be submitted at anytime, but at least six months prior to anticipated start date.

Proposals may be submitted at any time during the year. The Principal Investigator (PI) must have an active NSF-supported research grant.

A request for a Communicating Research to Public Audiences award must be submitted at least six (6) months prior to the anticipated starting date of the proposed project.

#### **D. FastLane Requirements**

Proposers are required to prepare and submit all proposals for this announcement/solicitation through the FastLane system. Detailed instructions for proposal preparation and submission via FastLane are available at: http://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program announcement/solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this announcement/solicitation.

Submission of Electronically Signed Cover Sheets. The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Proposers are no longer required to provide a paper copy of the signed Proposal Cover Sheet to NSF. Further instructions regarding this process are available on the FastLane Website at: http://www.fastlane.nsf.gov

#### VI. PROPOSAL REVIEW INFORMATION

#### **A. NSF Proposal Review Process**

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program Officers charged with the oversight of the review process. NSF invites the proposer to suggest, at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority-serving institutions, or adjacent disciplines to that principally addressed in the proposal.

The National Science Board approved revised criteria for evaluating proposals at its meeting on March 28, 1997 (NSB 97-72). All NSF proposals are evaluated through use of the two merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

On July 8, 2002, the NSF Director issued Important Notice 127, Implementation of new Grant Proposal Guide Requirements Related to the Broader Impacts Criterion. This Important Notice reinforces the importance of addressing both criteria in the preparation and review of all proposals submitted to NSF. NSF continues to strengthen its internal processes to ensure that both of the merit review criteria are addressed when making funding decisions.

In an effort to increase compliance with these requirements, the January 2002 issuance of the GPG incorporated revised proposal preparation guidelines relating to the development of the Project Summary and Project Description. Chapter II of the GPG specifies that Principal Investigators (PIs) must address both merit review criteria in separate statements within the one-page Project Summary. This chapter also reiterates that broader impacts resulting from the proposed project must be addressed in the Project Description and described as an integral part of the narrative.

Effective October 1, 2002, NSF will return without review proposals that do not separately address both merit review criteria within the Project Summary. It is believed that these changes to NSF proposal preparation and processing guidelines will more clearly articulate the importance of broader impacts to NSF-funded projects.

The two National Science Board approved merit review criteria are listed below (see the Grant Proposal Guide Chapter III.A for further information). The criteria include considerations that help define them. These considerations are suggestions and not all will apply to

any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which he/she is qualified to make judgements.

### What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

### What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

NSF staff will give careful consideration to the following in making funding decisions:

### Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

## Integrating Diversity into NSF Programs, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

### **Additional Review Criteria**

In addition to the standard NSF criteria (see above), the following will be considered:

- the clarity with which the PI has articulated the general science literacy goals as related to research;
- o the quality of the informal learning activity; and
- the relation between the science literacy goals and the choice of the target audience, the extent of the impact, and the evaluation strategies.

# B. Review Protocol and Associated Customer Service Standard

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Proposals submitted in response to this announcement/solicitation will be reviewed by Ad Hoc Review.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Director. In addition, the proposer will receive an explanation of the decision to award or decline funding.

NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the date of receipt. The interval ends when the Division Director accepts the Program Officer's recommendation.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

#### VII. AWARD ADMINISTRATION INFORMATION

#### A. Notification of the Award

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program Division administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See section VI.A. for additional information on the review process.)

#### **B.** Award Conditions

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (NSF-GC-1); \* or Federal Demonstration Partnership (FDP) Terms and Conditions \* and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreement awards also are administered in accordance with NSF Cooperative Agreement Terms and Conditions (CA-1). Electronic mail notification is the preferred way to transmit NSF awards to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

\*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/home/grants/grants\_gac.htm. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

More comprehensive information on NSF Award Conditions is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/cgi-bin/getpub?gpm. The GPM is also for sale through the Superintendent of Documents, Government Printing Office (GPO), Washington, DC 20402. The telephone number at GPO for subscription information is (202) 512-1800. The GPM may be ordered through the GPO Website at http://www.gpo.gov.

#### **C. Reporting Requirements**

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

ISE is in the process of developing a data-collection system. Pls may be required to submit additional reports using this system.

Within 90 days after the expiration of an award, the PI also is required to submit a final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for the PI and all Co-PIs. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project reporting system, available through FastLane, for preparation and submission of annual

and final project reports. This system permits electronic submission and updating of project reports, including information on project participants (individual and organizational), activities and findings, publications, and other specific products and contributions. Pls will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system.

#### **VIII. CONTACTS FOR ADDITIONAL INFORMATION**

General inquiries regarding this program should be made to:

• Orrin Shane, Program Director, Directorate for Education & Human Resources, Division of Elementary, Secondary, & Informal Education, 885 S, telephone: (703) 292-5106, fax: (703) 292-9044, email: oshane@nsf.gov

For guestions related to the use of FastLane, contact:

ESIE FastLane contact, telephone: (703) 292-8620, email: ehr-esie.info@nsf.gov

#### IX. OTHER PROGRAMS OF INTEREST

The NSF *Guide to Programs* is a compilation of funding for research and education in science, mathematics, and engineering. The NSF *Guide to Programs* is available electronically at <a href="http://www.nsf.gov/cgi-bin/getpub?gp">http://www.nsf.gov/cgi-bin/getpub?gp</a>. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter.

Many NSF programs offer announcements or solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices. Any changes in NSF's fiscal year programs occurring after press time for the *Guide to Programs* will be announced in the NSF E-Bulletin, which is updated daily on the NSF Website at <a href="http://www.nsf.gov/home/ebulletin">http://www.nsf.gov/home/ebulletin</a>, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's Custom News Service (http://www.nsf.gov/home/cns/start.htm) to be notified of new funding opportunities that become available.

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